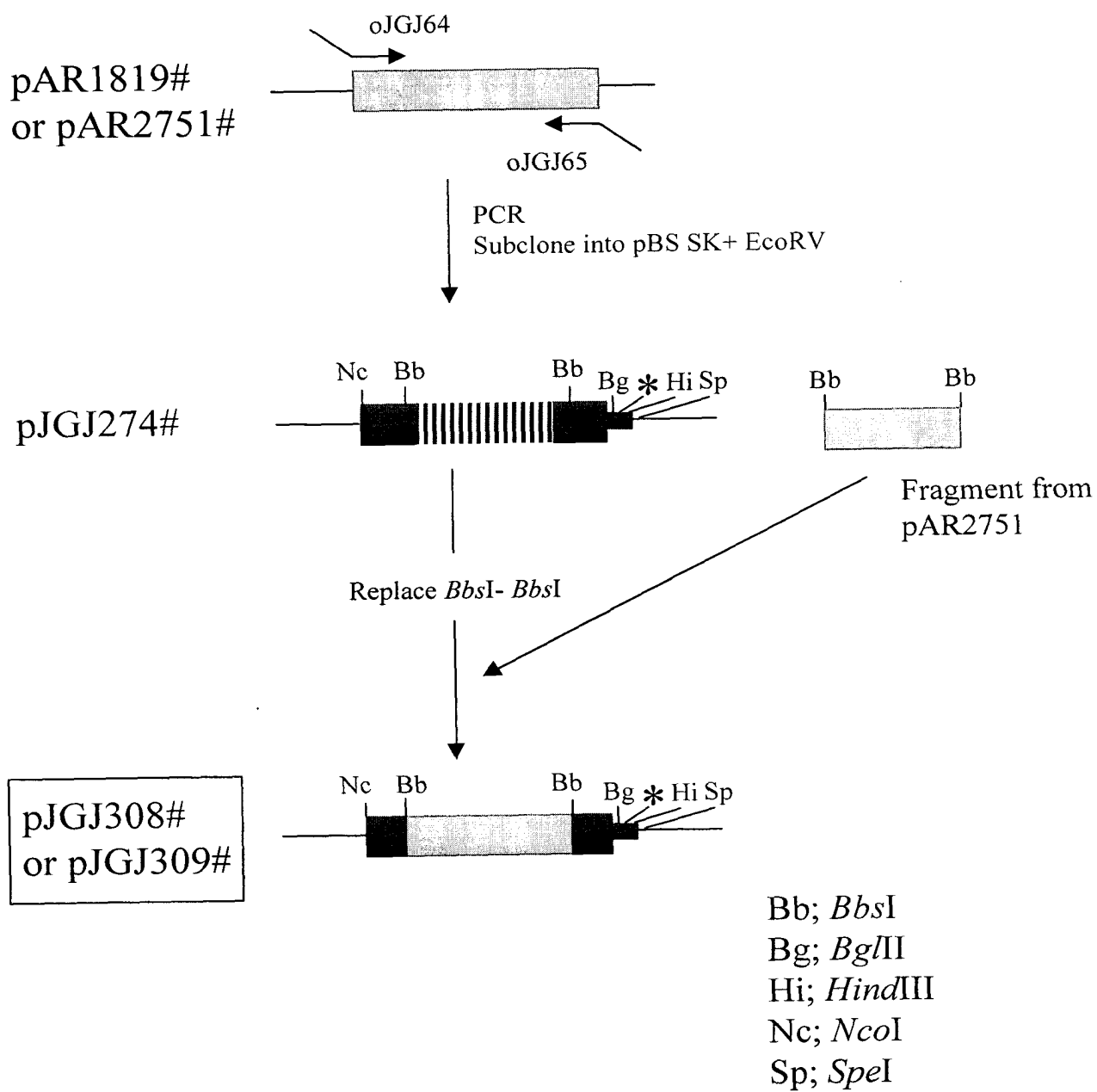


# Figure 1

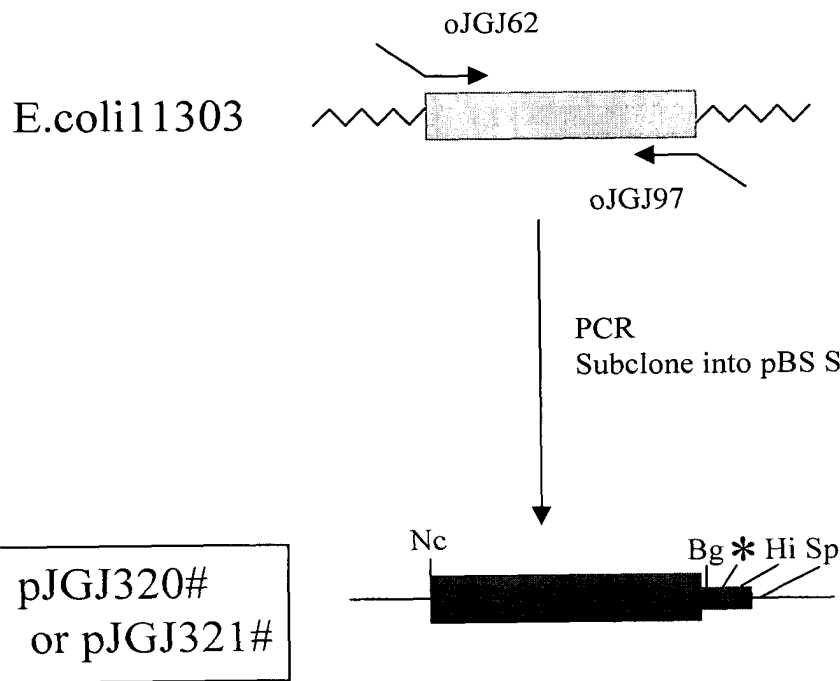
## T7 DNA polymerase (Gene5)



09044715-03101

# Figure 2

## TrxA gene

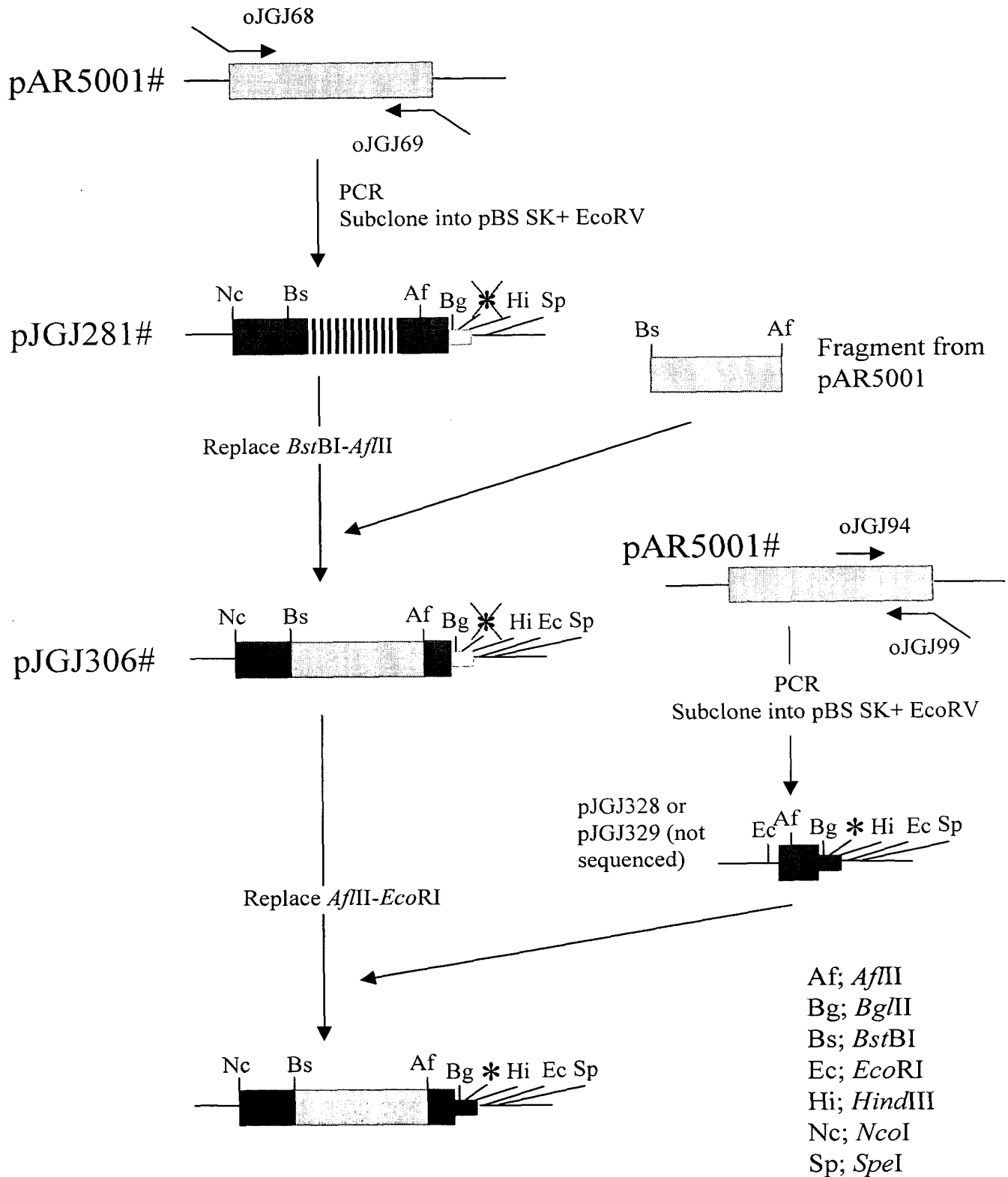


Bg; *Bgl*II  
Hi; *Hind*III  
Nc; *Nco*I  
Sp; *Spe*I

# Figure 3

## T7 gene 4A' primase/helicase

T01E80"ST44660

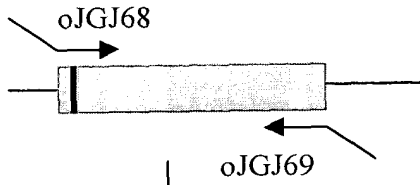


# Figure 4

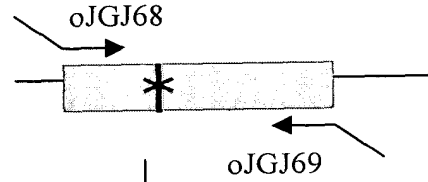
## T7 RNA polymerase genes

pAR3283# (w/nuc loc)

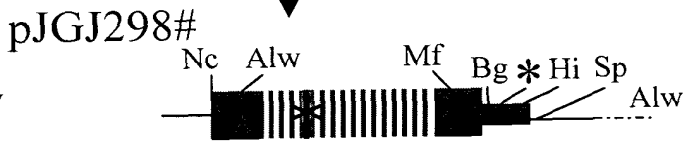
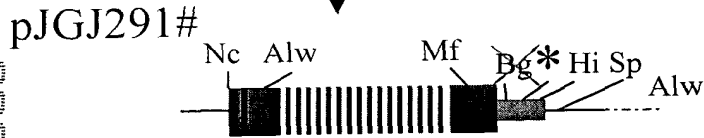
pX19# (A465Tmutation)



PCR  
Subclone into pBS SK+ EcoRV



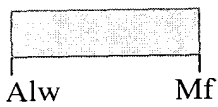
PCR  
Subclone into pBS SK+ EcoRV



Fragment from  
pAR3283

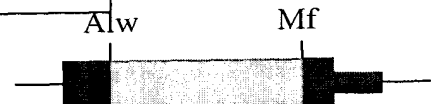
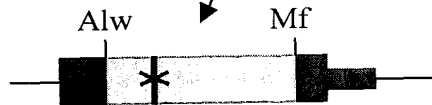
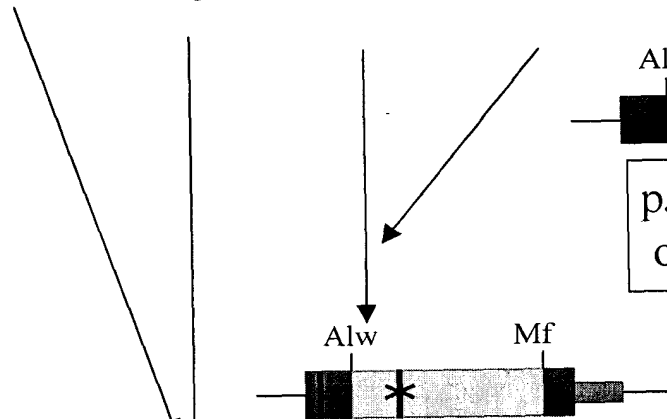
Fragment from  
pX19

Fragment from  
pAR3283



Replace *Alw*NI-*Mfe*I

Replace *Alw*NI-*Mfe*I



pJGJ312#  
or pJGJ313#

pJGJ314#  
or pJGJ315#

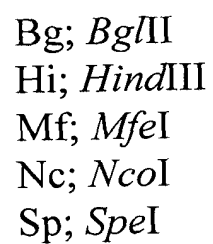


pJGJ310#  
or pJGJ311#

*Alw*; *Alw*NI    *Bg*; *Bgl*II  
*Hi*; *Hind*III    *Nc*; *Nco*I  
*Mf*; *Mfe*I      *Sp*; *Spe*I

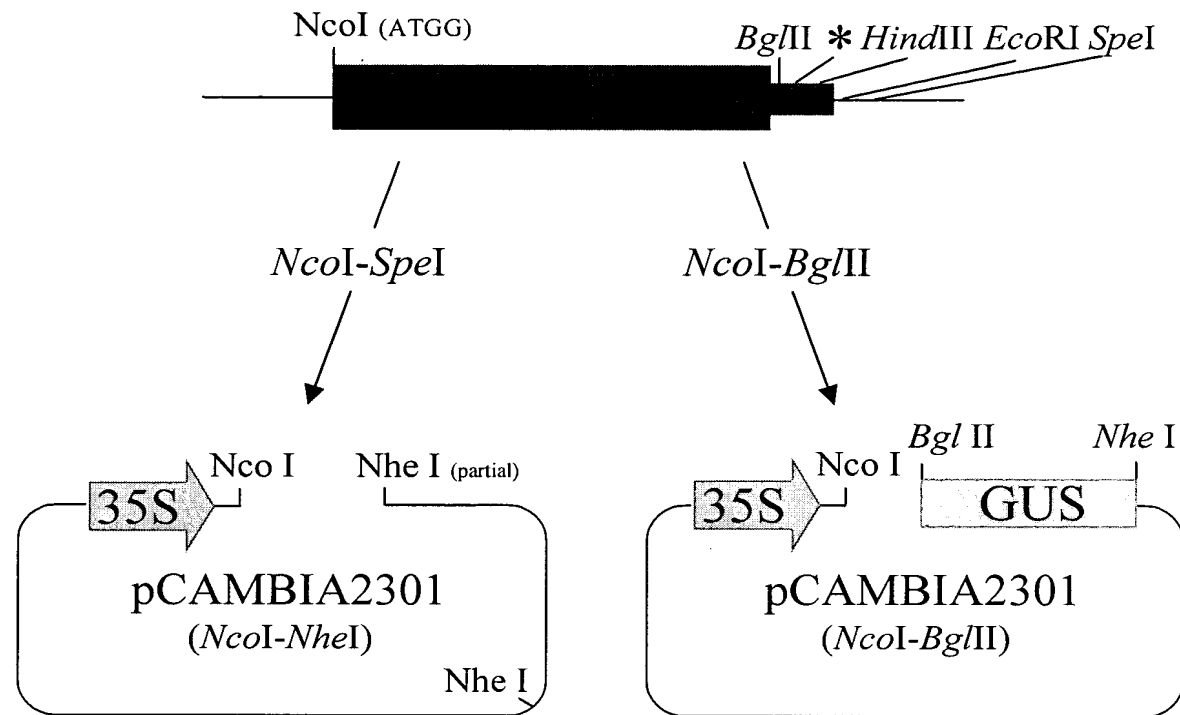
0944715.023101  
T07E80"5744660

# 6045-108-01



**Figure 6**

Generalized Subcloning into pCAMBIA vectors



over expression  
35Spromoter-GENE

Transport Assays  
for DNA replication

in-frame gene fusion  
35Spromoter-GENE::GUS

Look for nuclear localization  
in plant (e.g., onion) cell

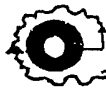
Figure 7 Rolling circle replication of artificial episomes



Artificial episome with T7 promoter and lox site.



Leading strand DNA synthesis by T7 DNA pol, resulting in rolling circle type replication



Lagging strand DNA synthesis by T7 Helicase/primase with T7 DNA polymerase. Resulting in linear concatemers of artificial episome.



CRE

CRE recombinase deconcatenates artificial episomes into separate circular molecules that each can initiate another round of rolling circle replication.

0944715.083101